

## ABSTRACT

### COMPOSITIONS AND METHODS FOR INHIBITING G2 CELL CYCLE ARREST AND SENSITIZING CELLS TO DNA DAMAGING AGENTS

The invention provides compositions and methods for inhibiting Chk1 and/or Chk2 kinases. Also provided are compositions and methods for inhibiting G2 cell arrest checkpoint, particularly in mammalian, e.g., human, cells. The compositions and methods of the invention are also used to treat disorders of cell growth, such as cancer. In particular, the invention provides methods for selectively sensitizing G1 checkpoint impaired cancer cells to DNA damaging agents and treatments. Also provided are methods for screening for compounds able to interact with, e.g., inhibit, enzymes involved in the G2 cell cycle arrest checkpoint, such as Chk1 and/or Chk2/Cds1 kinase.